

# VESTAL WATER SUPPLY WELL 1-1 NEW YORK

EPA ID# NYD980763767



**EPA REGION 2**  
CONGRESSIONAL DIST. 26  
Broome County  
Vestal

## Site Description

---

The Vestal Water Supply Well 1-1 is located on the southern bank of the Susquehanna River in the Town of Vestal. An industrial park is located immediately to the southeast of the well, along Stage Road. Several marshy areas and drainage ditches encompass and interlace the industrial park. The western portion of the site includes a water district well field, a soccer field, and a fire department training center. Well 1-1 is one of three production wells in Water District 1 intended to provide drinking water to several water districts in the Vestal area. The well is moderately contaminated with several volatile organic compounds (VOCs), including 1,1,1-trichloroethane and trichloroethylene. Well 1-1 was the main source of water for District 1 until 1980, when it was closed. Well 1-2 became the main source of water until 1988, when it was closed due to mechanical failure. Well 1-3 became the primary source of water for Water District 1, until replacement Well 1-2A was installed by the Town of Vestal. Well 1-1A, which was constructed during EPA's remedial activities at this site to replace failing Well 1-1, is now being used as an extraction well to treat the contaminated groundwater through an associated air stripping facility.

The original Vestal Water Supply Site also contained Well 4-2 in Water District 4. However, this well was separated into its own NPL site, Vestal Water Supply Well 4-2, when it was discovered that Well 1-1 and Well 4-2 were contaminated by two separate sources. Well 1-1 has pumped contaminated groundwater into the Susquehanna River since 1980, in order to prevent the contaminant plume from affecting other District 1 wells. Approximately 27,000 people reside in the Town of Vestal, and approximately 17,000 rely on public water supplies for drinking water.

**Site Responsibility:** This site is being addressed through Federal and State actions.

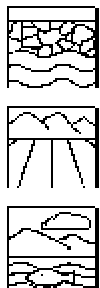
### NPL LISTING HISTORY

Proposedate: 12/01/82

Final Date: 09/01/83

## Threats and Contaminants

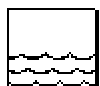
---



Pollution from the Stage Road Industrial Park has caused the groundwater in the vicinity of Well 1-1 to be contaminated with VOCs. Soils in the industrial park also contain significant levels of VOCs in two separate locations. The use of untreated water from Well 1-1 by the residents of Vestal could have exposed a significant portion of the Town's population to contaminants before the well was taken out of service in 1980. Residents in the area receive drinking water from public supply wells which are routinely tested to ensure compliance with state and federal drinking water standards.

## Cleanup Approach

---



The site is being addressed in three stages: immediate actions and two long-term remedial phases focusing on cleanup of the groundwater and source remediation.

## Response Action Status

---



**Immediate Actions:** Well 1-1 was removed from service in 1980.



**Groundwater:** Based on the results of the site investigation performed by the State, EPA signed a Record of Decision which selected air stripping treatment technology at Well 1-1. This remedy was intended to accomplish the following: (1) restoration of District 1 water supply capacity to the level that existed prior to the loss of Well 1-1; (2) provision of a water supply to the district that provides a high level of public health protection; (3) hydraulic containment of the plume contaminants by pumping Well 1-1, thereby protecting other District 1 water supply wells; and (4) treatment of groundwater from Well 1-1 by air stripping to stop the discharge of contaminated water to the Susquehanna River. The construction of the air stripping facility was completed in 1990. Subsequently, because Well 1-1's yield decreased to a level that might have been insufficient to contain the plume of contamination, the well was replaced by EPA with a well designated as Well 1-1A, which has a capacity similar to the original yield of Well 1-1. Well 1-1A and the associated air stripping facility will treat contaminated groundwater and discharge the treated effluent to the Susquehanna River as part of EPA's long-term response actions at this site.



**Source Remediation:** The EPA has completed an investigation that identified two specific source areas of contamination, designated as Areas 2 and 4, within the industrial park and evaluated possible contaminant source control measures to eliminate further

pollution of the groundwater. Remedial designs of in-situ soil vapor extraction (SVE) for Areas 2 and 4 contamination were completed in September 1994. Construction of the SVE system to treat contaminated soils in Area 2 was completed in January 1997. The SVE system began operations on January 18, 1997 and was terminated on November 20, 2000, after results of an interim soil sampling program confirmed that the SVE system successfully achieved the cleanup goals specified in the Record of Decision. Soil sampling was performed in Area 4 in September and October 2001 to further delineate the area of contamination and to refine the remedial design completed in September 1994. Construction of the Area 4 SVE system was started on April 1, 2003 and was completed on June 26, 2003. The remedy also includes monitoring of groundwater, with future treatment for heavy metals if necessary.

## Cleanup Progress



By closing down the contaminated well and making Well 1-3 and Well 1-2A the primary supplies of drinking water, residents are no longer exposed to contaminated drinking water. Groundwater from Well 1-1A is being pumped and treated prior to discharge into the Susquehanna River, thus protecting the public health and the environment. To date, the air stripping facility has treated approximately 2.3 billion gallons of contaminated groundwater over the seven years of operation. Soil cleanup actions will remediate the sources of contamination at the site. A total of approximately 1,046 pounds of volatile organic compounds was removed from Area 2 through the operation of the SVE treatment system. The volume of treated soil in Area 2 was approximately 17,000 cubic yards. The cleanup goals for Area 2 have been achieved. Since June 2003, a total of approximately 900 pounds of volatile organic compounds was removed from Area 4 through the operation of the SVE treatment system.

A five-year review of the site was conducted to ensure that the implemented remedies are protective of public health and the environment. Based on this review, it was concluded that the remedial actions for this site need to be continued, and that currently there is no human or environmental exposure to contaminated groundwater and soil. The next five-year review for the site is required by September 2008, five years from the date of the last review.

### **(Cleanup Yet To Be Performed)**

The cleanup goals cited in the Record of Decision have not been met for the groundwater or for the soils in Area 4. The groundwater remedy is expected to be completed when groundwater cleanup goals are achieved through air stripping. The SVE system in Area 4 began operations on June 27, 2003. It is expected that the soil cleanup goals specified in the Record of Decision for Area 4 will be achieved in approximately three years.

## Site Repository



Vestal Town Hall, 605 Vestal Parkway West, Vestal, N.Y. 13850